ABSTRACT

A method and arrangement for computing and regulating distribution of linear load in a multi-nip calender. A material web is passed through the nips in a set of rolls including a variable-crown upper roll, a variable-crown lower roll and intermediate rolls positioned between the upper and lower rolls. The rolls in the set of rolls are supported so that, when the nips are closed, the bending lines of the rolls are curved downwards. When computing and regulating the linear loads, one or more of the physical properties affecting the bending of each intermediate roll under load, such as bending rigidity, mass, shape, and material properties, are taken into account. The ratio of the linear loads applied to the intermediate rolls, the weight of the rolls per se, and/or the support forces applied to the rolls are regulated so that the set of rolls is in a state of equilibrium and a predetermined state of deflection.

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